Issue 15

Natural Areas Newsletter

July 1991

Naturally Yours

The Natural Areas Program is sponsored by Alberta Forestry, Lands and Wildlife

Threatened plant management plan . . . a first !

The survival of the western blue flag (*Iris missouriensis*), is addressed in the first management plan for a threatened Alberta plant.

The process began when members of the Alberta Native Plant Council (ANPC) prepared a detailed status report on the species. The status report was submitted to the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and the recommendation of "threatened" was endorsed. The report was used to formulate a draft management plan, outlining strategies to reverse the western blue flag's decline. The plan has been submitted to Alberta Fish and Wildlife for review, comments and subsequent implementation.

Work has begun on a fact sheet that provides information about the western blue flag including, description, status and distribution, reproduction, habitat, economic and biological significance, limiting factors, management and outlook. The ANPC is funding the writing of the text. Similar publications are already available through Alberta Fish and Wildlife offices for the burrowing owl, ferruginous hawk, peregrine falcon, piping plover, swift fox and woodland caribou.

Other Alberta plants for which status reports have been submitted through the ANPC are: the sand verbena (*Abronia micrantha*), western spiderwort (*Tradescantia occidentalis*) and smooth goosefoot (*Chenopodium subglabrum*). COSEWIC will be reviewing these and assigning status.

Work is progressing this summer to complete more reports. If you are interested in helping, contact the Alberta Native Plant Council, Box 4524, P.O. South Edmonton, Edmonton, Alberta T6E 5G4. Or call the council chairman Elisabeth Beaubien at 492-5520.

COSEWIC is a national organization dedicated to examining and promoting the plight of Canada's 400 potentially endangered species of plants and animals. The committee has no legislative authority and cannot take legal action to protect a species. It funds individuals to research and prepare written reports on species which are provided to government departments and environmental groups to assist them to identify and protect habitats at risk and monitor further damage. Alberta Forestry, Lands and Wildlife participates in COSEWIC.❑

PARKS ... for friends and family!

Celebrate Parks Day! Sunday, July 21, 1991

Alberta Recreation and Parks is spearheading provincial activities to stress the importance of all parks—national through local levels—and of protected areas for a strong and balanced conservation and recreation system in Alberta.

What can you do?

- take time to visit and learn about our parks and protected areas;
- respect the park environment and its facilities;
- volunteer in parks, serve on a park's committee, and participate in public planning opportunities;
- formally join a park movement. There are a range of park conservation organizations suitable for all ages and interests;
- participate in fitness, health and outdoor recreation programs;
- travel through Alberta to enjoy the parks, museums, and diverse communities;
- become a "greener" Albertan by practicing the three "Rs" of conservation: Reduce, Reuse, and Recycle; and
- work towards a cleaner and healthier environment in your community by "thinking globally but acting locally." Individual actions can become a force for improvement to our communities and to the world.❑

Summer's Here. Let the Inspections Roll In!

Dear Stewards:

Now that the summer season is here, I suspect everyone is anxiously waiting to visit their Natural Area so they can start filling in those critically important inspection reports. Right, gang? Just a reminder to please send in those reports!

On a different note . . . I receive many requests from stewards to supply signs, posts and hardware. Because of substantial budget cuts to the Natural Areas program, we may not be able to fulfill all requests, but we will try the best we can.

We had also hoped to host a second Volunteer Steward Conference in 1992 but for now it has been placed on hold. We recognize the need for continued training of and networking among stewards, so we are looking at alternatives including regional workshops. Watch future newsletters for confirmed dates and locations.

Have a great summer!

Sandra Myers

Sandra Myers, Volunteer Steward Coordinator❑

Summer Fun and Research in Alberta's Natural Areas

by Kevin Timoney,
an ecological consultant

During the summer of 1990, Richard Annas and I conducted biophysical inventories of five Alberta Natural Areas.

Moose Mountain

Our first stop was Moose Mountain, a 194 ha candidate Natural Area on the east slope of the Moose Mountain Anticline west of Calgary. Soon after our arrival at this beautiful alpine and subalpine environment, a thunderstorm descended. Thunder rumbled through the mountains and lightning stabbed the earth, giving us that "exposed" feeling and some adrenalin surges.

For such a small area, Moose Mountain has much to offer. It is the closest alpine site to Calgary and harbours many plants and animals at their range limits. The site affords great views not only of the city, but also the plains and surrounding mountains. Four geological formations provide for bedrock diversity, from rugged Rundle limestone cliffs to the younger eroded Mesozoic strata forming upturned edges along the east flank of the mountain.

Mt. Livingstone

Mt. Livingstone, in southwest Alberta, is a well-known 535 ha Natural Area that carries landscape and species diversity to the extreme. We were in awe of seven geological formations; 740 m of relief; elements of Alberta's fescue, montane, subalpine, and alpine land regions; 356 recorded species of plants; diverse fescue grasslands, windswept alpine tundra, forests and wetlands; and grizzly, marten, wolf and bighorn sheep.

The climax rough fescue grasslands provide a glimpse of what virgin grasslands may have been like before they were lost to the plow. Amazingly, fescue grasslands in this Natural Area grow up to 250 m higher in elevation than elsewhere in Canada.

Canmore Flats

For Canmore Flats Natural Area, the key word is dynamic. Shifting channels and periodic flooding of the Bow River form a constantly changing landscape. The flats cover 590 ha of river floodplain southeast of Canmore and are well known to North American trout fishermen. The towering white spruce; the ever-changing channels, bars, and floodplain vegetation; the gravel spawning beds used by trout and rare spring vegetation of Bill Griffith's Creek; and the powerful, turquoise waters of the Bow River hold something for everyone. A canoe will greatly increase your ability to explore this natural paradise.

Ponton River

The Ponton River candidate Natural Area, north of Fort Vermilion, occupies 1180 ha of the lower Ponton River valley. Surrounded by fields used for agriculture, this is an oasis of landscape and wildlife. Here we saw remnant native oat grass-needle grass prairie on the south-facing bluffs of the valley and at its northernmost limit in the province.

The summer of 1990 brought drought to northern Alberta and left a brown ribbon of water winding its way between the banks of the Ponton River. Brown water flowing over brown-stained rocks makes for tricky canoeing and the canvas of my canoe took some punishment. Still, the wear and tear were worth it, for the canoe was by far the best means of travel to "experience" rather than simply observe.

We saw many beaver, moose, black bear northern goshawks, cooper's hawks and great horned owls. Yellowjacket wasps were particularly abundant. Some of these wasp species make inconspicuous nests in the ground, a fact driven home to me when I stopped to read a map and sat on one nest by mistake!

Fourth Creek

Located west of Fairview, Fourth Creek flows east as a tributary of the Peace River. The Fourth Creek Natural Area spans 1040 ha of a deeply incised valley. The south-facing banks are covered by pristine wheat grass grasslands and the north banks by aspen-white spruce forest. Golden eagles nesting in the vicinity, floated on the air currents above the creek valley and often landed on a favourite promontory and hopped about in the grass. Fossil-bearing rocks, rare plants such as *Hordeum jubatum* ssp. *breviaristatum*, scenic sandstone outcrops, a 6-m high waterfall and the grand Peace River combine to make this Natural Area a special place.

*"These trips reinforced our belief that in a disappearing natural world we must all do what we can to preserve all natural areas, not simply for ourselves, but for future generations of **all** creatures."*

Recurring massive landslides and slope failures, likely caused by internal seepage, create a mosaic of vegetation communities and landforms as well as potential danger to mammals walking those slopes. There had been a number of landslides before our arrival and two were large enough to block the valley of Fourth Creek.

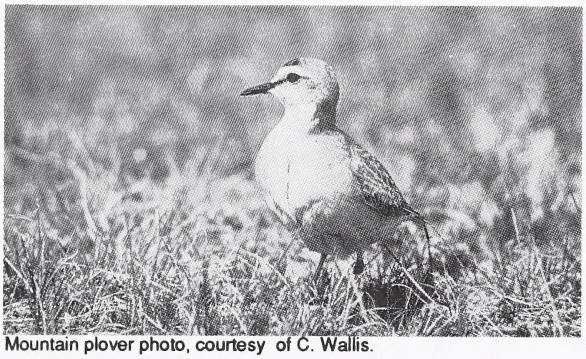
Black bears are numerous in the valley. One cinnamon yearling took a liking to Richard and shadowed him daily as he did his fieldwork. While the cinnamon's obvious curiosity was delightful for us to watch, the sow was less delighted, leading to some tense moments of shouting, shovel banging, and swinging of a camera tripod. The sow would amble away, but the yearling would plop down on its haunches with a bewildered look and pound the ground with its forefeet, as if to say "Encore"!❑

The Search Continues

In 1990, Natural and Protected Areas, in conjunction with the Fish and Wildlife Division and the Prairie for Tomorrow program of World Wildlife Fund Canada, commissioned Sweetgrass Consultants Ltd. to complete studies on several Alberta species. The reports on the northern leopard frog, western hognose snake, great plains toad and mountain plover will be used to gain a better understanding of the status of each species.

Mountain Plover

Mountain plover is an Endangered species in Canada and a Vulnerable species in Alberta. Work done in 1990 consisted of reconnaissance surveys for the species at sage grouse leks and survey of traditional and adjacent potential nesting habitat. No birds were sighted during the surveys but reports were received of at least two birds (one with a nest and eggs) on a sage grouse lek.



Mountain plover photo, courtesy of C. Wallis.

Summarized from *Survey of Mountain Plover Habitat in Alberta - 1990* by C. Wershler, Sweetgrass Consultants Ltd., 1990.

Northern Leopard Frog

They were once abundant and widespread throughout the central and southern parts of Alberta. In 1979-80, populations suddenly disappeared from many areas. Since then, there has been a general decline in the population and several possible explanations have been put forth including drought and the drying of habitats, red-leg disease, toxic substances and overwintering mortalities. The reasons for the abrupt change are not known.

In 1990, Sweetgrass Consultants Ltd. found northern leopard frogs at 32 sites, representing 19 populations. However, evidence of breeding activity, including egg masses, calling and young-of-the-year, was documented at only 14 sites (11 populations). This frog has not been reported within the last eight years in 76 Alberta townships. There are only nine major breeding populations and all are located in the southeastern portion of the province. Eight are found in the Mixed Grassland ecoregion and one in the Cypress Hills.

Followup studies are being done on leopard frogs this year through Prairie for Tomorrow. Monitoring programs will be implemented at major populations and additional sites will be visited where frogs were once known to occur. This will be followed with the preparation of a management plan in the fall of 1991. If you see leopard frogs in your ventures, please report the sighting to your nearest Fish and Wildlife office. Photographs are helpful but take care not to disturb the frogs or their habitat.

Summarized from *Status of the Northern Leopard Frog in Alberta - 1990* by C. Wershler, Sweetgrass Consultants Ltd., 1990.

Great Plains Toad

This study assessed general population trends in the province. In Alberta the species is found only in sand plain and sandhill habitats of the extreme southeast in shallow, temporary ponds or quiet waters of streams and irrigation ditches. Clear water is needed for breeding pools.

The general population of this species has declined, perhaps as much as 50 per cent, because of drought. There are only five general populations and total individuals are estimated at 1,000. Further field research could see an increase in the estimate of numbers of individuals.

Threats to the population include habitat alteration and destruction (wetland drainage and alteration of the groundwater), cultivation around ponds (chemicals and exotic species) and cattle activity (turbidity).

Summarized from *Status Report on the Great Plains Toad in Alberta* by W. Smith and C. Wershler, Sweetgrass Consultants Ltd.

Western Hognose Snake

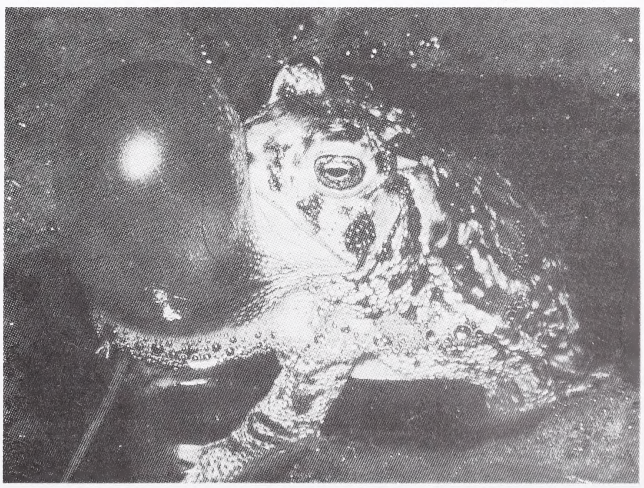
This snake is found on Alberta's Mixed Grassland only in sandy soils and most records are from the Lost River and Empress areas. There have been only 33 recorded sightings in the last 62 years indicating the snake's secretiveness, rarity or both.

This project examined methods of locating these snakes in hopes of using this information to further our knowledge of population size and range. Only one individual was caught and released through live-trapping in 222.5 trap-days. A trap-day is one trap set up for 24 hours.

The study concluded that this snake is rare in Alberta. The decline of its two major prey species, the plains spadefoot toad and great plains toad, because of habitat loss and drought may be contributing to a decline in the hognose snake.

If you spot a western hognose snake, please report it to your nearest Fish and Wildlife office.

Summarized from *Pilot Project on the Study of the Western Hognose Snake in Alberta* by W. Smith and C. Wershler, Sweetgrass Consultants Ltd.❑



Great plains toad photo, courtesy of C. Wershler.

Site Activities

Become better informed about recent Natural Areas happenings through this new regular section. The numbers refer to locations on the accompanying map.

1

Management Plan approved for **Sand Lake Natural Area**. The plan was developed in cooperation with the Sand Lake Natural Area Management Advisory Committee which includes representatives from provincial and local governments, local residents and organizations. Guidelines for future use and protection of this 2590 ha site are focused on Sand Lake. This sand dune and plain area with intervening wetlands is a popular spot for local recreationists.

2

A 52 ha site adjacent to **Hollow Lake** placed under a land use reservation for Natural Area purposes. This site includes over 1.5 km of undisturbed shoreline, with associated upland habitat on gentle to moderately rolling terrain. Much of the surrounding area has been developed for agricultural purposes, elevating the importance of this site for wildlife habitat.

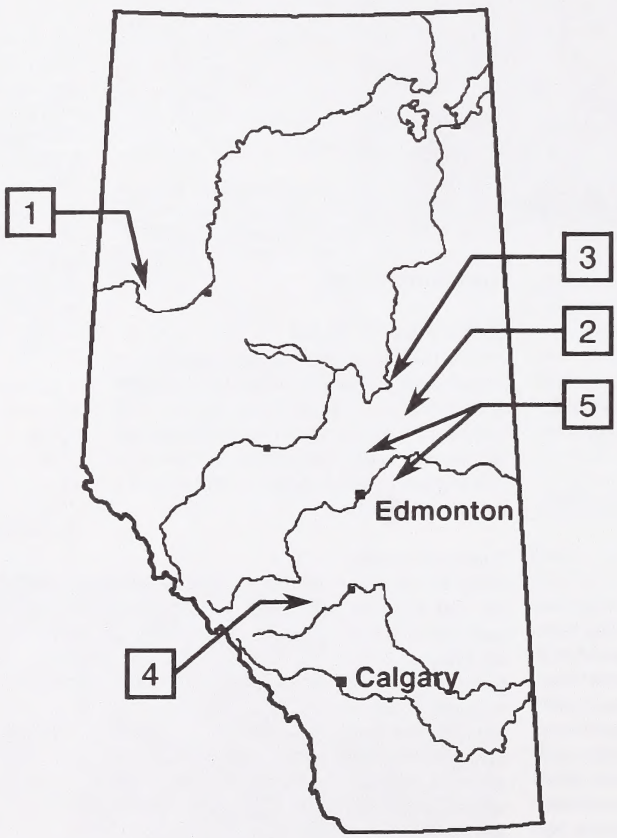
3

An environmental assessment study for a planned road right-of-way through the **Pine Sands Natural Area** is underway. Identifying any significant features including rare plants that could be negatively affected and recommending mitigative measures to minimize impacts of the road are emphasized. The road and a bridge to cross the Athabasca River are being constructed as part of the infrastructure for the Alberta-Pacific pulp mill located south of the Natural Area.

Archaeological study approved.

Letter of authority granted for the installation of 20 bird nesting boxes.

SITE ACTIVITIES
(APRIL 1 – MAY 31, 1991)



4

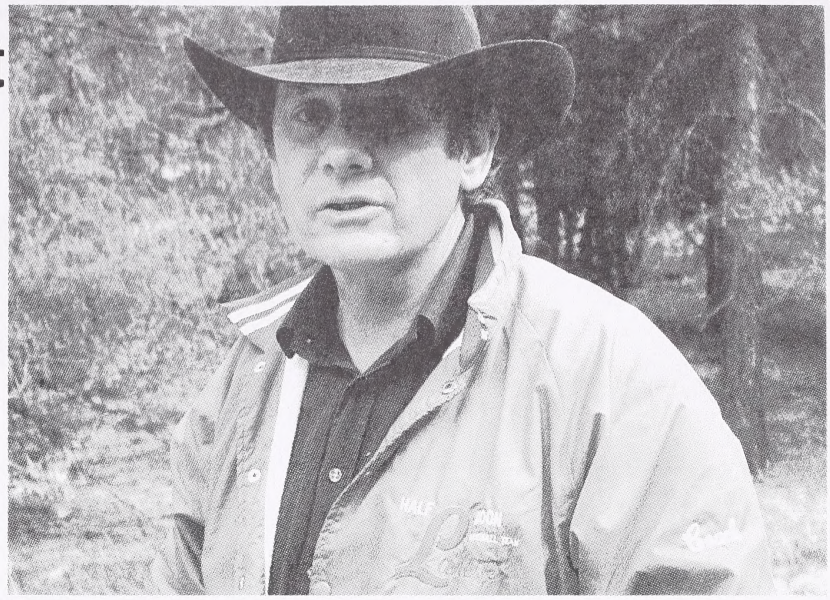
A small isolated parcel of land deleted from the **James Junction Natural Area** (under reservation). The parcel is a narrow strip of land adjacent to Highway 22 that was dissected by several pipeline rights-of-way.

5

Militia training exercises held on the **Redwater, Opal and North Bruderheim Natural Areas**. These exercises include field, communication or map and compass skills and are usually held on weekends. They do not involve pyrotechnics or use of ammunition.❑

Volunteer Steward Profile:

Richard DeSmet



As a boy, Richard DeSmet explored on horseback the hills of what has become the Halfmoon Lake Natural Area.

When the Volunteer Steward program was launched, Richard was among the first to apply and this site became his responsibility. Today he is president of the 20-member Rainbow Equitation Organization, stewards of the Opal, Bridge Lake, Taylor Lake and Anton Lake Natural Areas as well as Halfmoon Lake. His wife Vera handles the paperwork for all sites and the organization.

"Our organization's goal is to get as much accomplished in the Natural Areas as possible," says Richard. That goal is nearly achieved for Halfmoon Lake. Volunteers have erected fencing, signage and gates to restrict all-terrain vehicle use. Two bridges are complete and 15 km of developed trails wind through the site. Still to come are more fencing and signs and another bridge that will permit access to a County of Thorhild primitive campground located within the Natural Area. Education is a priority. A biological study for the area was completed last year and when it is released the organization plans to establish a nature study for schools.

How has the organization been able to do so much? The real secret of their success has been lots of volunteer work as well as funding from the Natural Areas program and the Recreation, Parks and Wildlife Foundation. "The one mistake we made was trying to take on too much," admits Richard. "We realize now that it isn't imperative to open up the site and that protection should come first." Priorities would be to educate the public about their impact on the environment, to maintain fencing and signage and to develop a system to patrol the area to keep a handle on activities.

"We'd like to be able to protect the site even more", says Richard. "To do that we hope to acquire a mile of privately owned lakefront property that would tie the Natural Area to the lake."

The Thorhild community has been home to Richard for 33 years. In close proximity to Edmonton (64 km), the area boasts sand dunes, jack pine, spruce swamps, stands of spruce, creeks, coulees and wildlife including moose, deer and the occasional bear which are likely to be spotted within a three-hour trek. The Natural Area is about a kilometre from the historic Athabasca Landing Trail, a portage route first used in 1877 for horse drawn carts to travel between the North Saskatchewan River at Fort Edmonton and the elbow of the Athabasca Landing (now the town of Athabasca).❑

About Landing Trail House

Horses, riding trails and three sons needing summer employment sparked an idea that led Richard to approach the Natural Areas program about operating a privately owned company on part of the site.

The proposal was considered carefully by Alberta Forestry, Lands and Wildlife. The department wanted assurances that any negative impacts on the site's established riding trails as a result of increased use were addressed before a Licence of Occupation (LOC) was granted to the Landing Trail House company to offer sleigh, trail, wagon and horseback rides. This licence makes public land available for recreational purposes to individuals, societies, associations and companies and is usually issued for construction of roads and trails.

"Protection of the site for wildlife and habitat has always been our first concern", says Peter Lee, manager of Natural and Protected Areas. "Richard's proposal for Landing House Trail complemented the natural features of the site and clearly outlined his commitment to monitoring and using only the portions of Halfmoon Lake that could handle the increased traffic."

The department established strict operating guidelines and Richard's activities are closely monitored by Natural Areas program staff. He leases adjacent privately owned land to offer people a place to camp or enjoy campfires. This summer will be the first full season for the company and will keep sons Aaron, Matthew and Luke busy.

Richard thinks this business works well on Halfmoon Lake Natural Area. "The Natural Area gets more care and attention than it otherwise would because we're regularly on the site. As well, there's a perception that Natural Areas take productive land out of use and this is just one example of how that idea is proved wrong."

Richard is a staunch supporter of the Natural Areas program. "It is the single, most powerful tool the Alberta government has to instruct people how they can adjust their way of thinking and behaviour to become more ecologically aware. Here is an opportunity for the average person to make a real solid commitment to the environment".

Helping people understand

Educating the public is the key. He speaks from experience. Halfmoon Lake has already benefited from instructing people about proper use of the land and resources. Two years ago the site was being damaged by the actions of some all terrain vehicle users. Since the Rainbow Equitation Organization knew the individuals would ignore requests to not use the site, they decided to meet with them and explain why their actions were inappropriate. It worked better than anticipated. The people adjusted their leisure habits, joined the organization and now act as custodians.

Richard would like to see corporations become stewards of Natural Areas. "Corporations are missing the boat. They could set an example and use their resources to do a first class job in cleaning up and protecting sites." His advice to other volunteer stewards? "Try your level best to pick the program staff's minds. Make sure you know what they know."❑

Return to:

Natural Areas Program
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Kids Corner

Editor's note: Watch for this column to appear in future issues of the newsletter. You'll find practical and creative ideas to help teach children more about Alberta's Natural Areas.

Most children love the outdoors and would eagerly accompany you on the inspections of your Natural Area. Exploring the site with you can help them gain a respect and understanding for the importance of nature and conservation. As a Volunteer Steward you have an excellent educational resource for your children at your disposal.

Children are always fascinated by wildlife; you can show them how to look for evidence of animal species in your Natural Area. A good indicator of the diversity of animal life is different types of tracks. Identifying common animal tracks can be easier with the help of a plaster cast.

Choose places in the site that are near water or on well-worn trails for track hunting. To make a cast, press a 5-cm wide strip of cardboard or tin around the track. Mix about 500 ml of plaster of Paris and pour it into the mould. Allow 15 minutes for it to harden before lifting and cleaning the cast. You now have a "reverse topography" track, which is raised instead of depressed. You can make a depression at home. Apply a thin coating of petroleum jelly to the cast and surround it with a strip as before. Pour plaster of Paris into the mould and allow two hours for it to harden before removing the cast. Children can use finished casts as a reference to identify, draw and label the tracks of animals common to your Natural Area. A good reference guide to use for identification purposes is Olaus J. Murie's *"A Field Guide to Animal Tracks,"* from the Peterson Field Guide Series.

A naturalist studies nature by making and recording direct observations; have your children gain experience in this regard by giving them their own journals. Take them to the Natural Area and ask them to sit quietly, looking and listening carefully (I realize that this might be impossible, but work with me here). In their journals they can record impressions, feelings and observations. They should move to different spots in the Natural Area in order to get a feeling for the whole environment.

Track hunting and journal making only touch the surface of a range of activities through which children can have rewarding learning experiences in Alberta's Natural Areas. Your site is full of opportunities and you are limited only by your imagination.

by Paul Sparrow-Clarke❑

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Coming Events

Edmonton Plant Study Group and Alberta Native Plant Council

July 21 - Aspen Parklands: Rumsey. Cheryl Bradley will lead this trip through the largest block of aspen parkland in western Canada. For more information, call Del Lavalle at 240-3798.

August 10 - Lily Lake: Aquatics. Explore the lake via canoe with botanists George Scotter and Patsy Cotterill. Bring a canoe and life jackets if you have them. Call Patsy Cotterill at 481-1525 for additional information.

August 17 - Fort Assiniboine Sand Dunes: Klondike Trail. Walk the historic Klondike Trail as it winds through the Fort Assiniboine Sand Dunes with naturalist and boreal ecologist Matt Fairbarns. Meet at 9:00 a.m. at the Fort Assiniboine campground, only 90 minutes from Edmonton. Call Matt at 437-0177 or 435-7310 for more information.

September 7 or 8 - Sunshine Village Reclamation (Tentative). View reclamation of an alpine ski area using native plants with Gail Harrison (Canadian Parks Service) and Brian Smythe (Sunshine Village Ski Resort). Call Kathy Wilkinson at 278-3203 for details.

Edmonton Mycological Club

Forays

July 27	Emily Murphy Park
July 28	Bruderheim Sandhills
Aug. 10	Westend River Valley at Groat Bridge
Aug. 11	Devon
Aug. 30- Sept. 2	Weekend at Shaw Lake
Sept. 7	Wagner Natural Area
Sept. 8	Ministik Lake
Sept. 27- 29	Matsutake mushroom weekend in Valemont, BC

For more information on any of these planned forays, please contact Steve Davies (434-7354) or Norman Grimes (459-8955). Regular meetings are held the first Wednesday of each month at 7:30 p.m. in Rm 2-27 of the Medical Sciences Building (opposite the Jubilee Auditorium) at the University of Alberta.❑